

Professional and Managerial Branch
Engineering Group
Engineer Series

E.P.W.U. CHIEF SANITARY DESIGN ENGINEER

05/95

Summary

Under general direction, plan, direct and supervise personnel engaged in engineering projects specific to water and wastewater treatment plant design and construction.

Typical Duties

Oversee and participate in water and wastewater facility design. Involves: developing design criteria and setting parameters for the preparation of construction plans and specifications for complex water production facilities, water treatment plant improvements, wastewater treatment systems and facilities, and odor control improvements; reviewing construction designs and assuring that they are functional, practical and economical and comply with operational requirements; serving as a consultant to plant operations staff to investigate and propose solutions for unusual problems with plant equipment, structures or processes.

Project manager for design and construction of complex water and wastewater treatment plant projects as assigned. Involves: reviewing construction plans and specifications of treatment plant construction projects to ensure plans conform to operational requirements; coordinating with consultants, operating divisions, engineering division, state and federal regulatory agencies, and contractor on plant construction and project change orders; ensuring projects satisfy complex environmental and public health regulations and are in accordance with applicable permits and comply with state of federal funding requirements; making field decisions to resolve construction conflicts; making certain that construction projects are built within the allotted time frame and budget; assisting plant staff during start-up and check-out of facilities and advising or training plant staff as necessary.

Supervise assigned personnel. Involves: Scheduling, assigning, instructing, guiding, checking and evaluating work; arranging for or engaging in employee training and development; enforcing personnel rules and regulations, standards of conduct, work attendance, and safe working practices; ensuring adherence to applicable regulatory and departmental standards; counseling, motivating and maintaining harmonious working relationships among subordinates; recommending staffing and employee status changes; interviewing applicants and recommending selection.

Provide staff and technical assistance and perform administrative duties. Involves: assisting the Engineering Services Manager in the preparation of a long range capital improvement program for water production and treatment facilities and wastewater treatment facilities; preparing and submitting technical reports with scope of problem and recommendations; requisitioning supplies, material and equipment; developing requests for proposals, participating in consultant selection committee; negotiating engineering contracts; giving professional advice and assistance to engineering staff; maintaining records and preparing reports; performing related professional engineering duties as required.

Minimum Qualifications

Graduation from an accredited college or university with a Bachelor's Degree in Civil or Sanitary Engineering or related engineering discipline and eight years of civil or sanitary engineering experience in the design or operations of large water or wastewater facilities (e.g. capacities of at least ten million gallons per day) with pump stations and treatment plants, including four years managing a large water or wastewater plant operation or four years in a supervisory capacity as project manager responsible for a large plant project, and demonstrated experience working with regulatory agencies; or an equivalent combination of training and experience.

Comprehensive knowledge of the principles and practices of Civil Engineering as it relates to waste and wastewater plant design and operation. Extensive knowledge of: the methods, materials, tools and equipment used in public works design, construction and inspection; the methods, practices and procedures utilized in the treatment processes of water and wastewater including pumping systems; the design and related engineering and chemical aspects of water and wastewater treatment plant facilities; cost determination techniques; E.P.A. standards and requirements concerning water and wastewater treatment. Considerable knowledge of administrative managerial practices and procedures relating to managing large construction projects; safe working practices and procedures. Good knowledge of: the use of the compute-aided drafting and design (CADD) systems; the chemistry of water and wastewater treatment and process control.

Ability to: plan, direct, supervise, and coordinate the work of assigned personnel; train, instruct, review and evaluate employees in various plant and laboratory operations; express oneself clearly and concisely, both orally and in writing;

enforce personnel rules and regulations, standards of conduct and work attendance; establish and maintain effective relationships with employees, officials and the general public; make sound decisions; maintain files and prepare reports; conduct public meeting; enforce safe working practices and procedures.

Physical Requirements: Must work in a field and construction environment to oversee and inspect construction in progress; occasional exposure to adverse weather conditions; exposure to unpleasant odors.

Special Requirement: Subject to on-call during non-working and mandatory recall during periods of public works emergency operations.

Licenses and Certificates: Either registration as a Professional Engineer in the State of Texas or professional registration in another state and have the ability to receive a Texas registration within one year of the date of hire; Texas Class "C" Driver's License or equivalent license issued by another state.

Director of Personnel

Department Head

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